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ABSTRACT

This study examined the potential consequences of reductions in the fiscal support of 4-year public colleges and universities in general and in Virginia in particular from the perspective of academic officers. In 2002, a qualitative case study was initiated in conjunction with the chief academic officers of Virginia's 15 4-year public colleges and universities. The data from interviews, correspondence, and surveys were used to assess the institutional perspective relative to the 2002 General Assembly appropriation reductions and the October 2002 budget cuts. Because the timing of the diminished funding did not correspond with academic planning cycles and other factors, comparative quantitative data reflecting the budget impact will not be available until, at the earliest, the end of academic year 2003-2004. However, early data collection suggests the concerns of academic officers expressed in this study were well founded. Academic officers anticipated that students would experience significant direct and indirect costs associated with Virginia's fiscal crisis, especially reductions in academic support services and larger classes. Fewer faculty available for advising and reductions in services such as library hours were also expected. Institutions were apprehensive about the influence of economic uncertainly and reductions in research support on their ability to retain professors, since faculty evaluations are heavily reliant on research productivity. Academic officers indicated that the public 4-year institutions vary widely in their ability to sustain operations through the current economic crisis. Observations from this study present compelling evidence of potential damage to Virginia's higher education system. Disadvantaged students in particular will be adversely affected by budget cuts. (Contains 3 tables and 50 references.) (SLD)

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A SCHEV White Paper

Budget Choices, Policy Decisions:

Challenges Facing Virginia's Four-year Colleges & Universities in the Midst of a Budget Crisis

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SCHEV
STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA
ADVANCING VIRGINIA THROUGH HIGHER EDUCATION

Executive Summary

Budget Choices, Policy Decisions: Challenges Facing Virginia's Four-year Colleges and Universities in the Midst of a Budget Crisis

This paper examines the potential consequences of reductions in the fiscal support of four-year public colleges and universities in general and Virginia in particular from the perspective of academic officers. In the summer and fall of 2002, a qualitative case study was initiated in conjunction with the chief academic officers of Virginia's fifteen four-year public colleges and universities. The data secured through interviews, correspondence and surveys was used to assess the institutional perspective relative to the 2002 General Assembly appropriation reductions and the subsequent October 15, 2002 budget cuts. The timing of diminished funding did not correspond with academic planning cycles and other factors contributing to the fiscal well-being of institutions. As a result, comparative quantitative data reflecting budget impact will not be available until at the earliest, the end of academic year 2003-2004. However, early data collection suggests that the concerns of the academic officers were well founded.

The goal of the investigation is to provide salient information to policymakers as they consider the role and configuration of Virginia's higher educational system in the new millennium. While all levels of public education face the possibility of decreased support as a result of state budget deficits, the foci of this paper are the idiosyncratic burdens faced by Virginia's public four-year postsecondary institutions. Issues presented in this paper, however, also reflect a similar predicament in the Commonwealth's Community College system and postsecondary institutions throughout the nation as nearly every state grapples with budget deficits, reduced revenues and increased demand for state-funded services (Boyd, 2002).

Virginia has an exemplary higher educational system, which has distinguished itself as possessing high caliber and diverse types of four-year institutions. Many scholars are recognized as highly competent and renowned in their fields, as evidence by the two conferred Nobel Prizes in 2002 and the external funding secured through grants, patents, and collaborations with various enterprises. The Commonwealth's research institutions maintain impressive national and regional ranking, and smaller institutions are regularly lauded for their stellar programs (U.S. News & World Report, 2002). Virginia has the 11th largest educational system of any state in the nation supporting fifteen public colleges and universities, of which two are Historically Black Colleges and Universities (HBCUs) and one military academy.

Initial budget shortfall projections as Governor Mark Warner took office in January of 2002, approximated $3.8 billion dollars, which after adjustments increased to over $6 billion. Preauthorized spending could not be supported in light of a recession, reduced state revenue, increased needs for security, and a record setting drought. Several strategies were employed to address the significant fiscal exigencies which included applying one-half of the "rainy day" reserve, requiring significant spending cuts of all state agencies, layoffs of thousands of full and part-time employees, freezing car tax reimbursements, and shrinking the size of state government. For the first time in six

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years, public colleges and universities were permitted to raise tuition to help compensate for reductions in state appropriations (The Chronicle of Higher Education, 2002a; Warner, 2002 a). Despite permission to raise tuition, reductions in state appropriations continued to pose considerable short and long-term challenges to students, faculty and institutions, which have implications for other states as they consider plans designed to resolve their own revenue inadequacies.

Findings

Student Concerns

It was anticipated that students would experience significant direct and indirect costs associated with Virginia's fiscal crisis. For example, as a result of budget constraints the quality and quantity of university interactions are apt to change. Below are several examples of the potential consequences of the current budget crisis on students as reported by university provosts. They are:

- Reductions in academic support services;
- Larger classes;
- Fewer sections (which impacts time to graduation);
- Decreased opportunities for internships, study abroad, independent study, and research;
- Diminished financial support;
- Fewer faculty available for advisement;
- Increased costs (which disproportionately impacts disadvantaged students); and,
- Fewer library hours to complete research and other assignments.

Information Technology (IT) help desks, and tutoring services also may be curtailed because of the absence of fiscal support. Fewer professors on staff may result in larger classes and fewer sections of courses, potentially increasing time to graduation. Longer stays in college raise the cost of earning a degree and decrease the likelihood that students will graduate. Academic support services, such as those designed to hone writing skills may be discontinued. As expenses related to college attendance rise, economically disadvantaged students are more vulnerable to dropping out. Fewer professors can also mean a reduction in availability for student advisement, independent study courses and small advanced capstone seminars. Research opportunities for students suffer without adequate faculty oversight. Each of these academically valuable and intellectually enriching experiences have historically been integral parts of some programs. Hiring of adjunct professors in some cases may prevent a reduction in the number of available courses or sections; however adjuncts cannot replace full-time faculty members in many functions.

Virginia's enviable national rankings are not secure as the numbers of classes (a reduction of nearly 2,800 course sections) and services available to students are cut and the numbers of faculty available for student interactions (advisement, internships, research and independent studies) are severely reduced (Irving, 2002; Virginia Business

Higher Education Council, 2002). The combined impact of these changes is also apt to influence Virginia institutions' ability to recruit highly qualified out-of-state students.

Faculty Impact

In a communication from the presidents of Virginia's public colleges, universities and community colleges, it was reported that there would be approximately 1,470 fewer faculty members on staff in the academic year of 2003-2004 than there were in 2001-2002. The timing of these reductions coincide with an anticipated increase in student enrollment of approximately 38,000 by 2010 (State Council of Higher Education for Virginia, 2003; Virginia Business Higher Education Council, 2002). Routine attrition and retirements account for some but not all lost faculty members. In light of budget deficits and projected increases in the rates of retirement, significant burdens will be placed on remaining faculty, particularly because of budget-related hiring freezes. Some of the potential consequences of budget reductions on faculty are:

- Increased teaching load and larger class sizes;
- Curtailed participation in community outreach and university duties such as accreditation reviews and search committees;
- Decreased institutional support of faculty research projects (which includes library acquisitions, laboratory investments and other related expenses);
- Fewer resources for faculty professional development and conference travel;
- Reduced time to support graduate and undergraduate student research projects;
- Increased advisement responsibilities; and,
- Reduced ability to attract and/or retain productive faculty at all ranks.

Unfortunately, the current fiscal crisis has not only frozen salaries in some cases it has severely minimized research support. Salaries of the Commonwealth's full-time public four-year faculty are already in the 35th percentile when compared to other states, placing current salary compensation far below the national average (Casteen, 2003). Institutions are apprehensive about the influence of enduring economic uncertainty and reductions in research support upon their ability to retain professors because faculty evaluations are heavily reliant upon research productivity. All of the above noted factors are expected to have a negative impact an institutions' ability to attract and retain both senior faculty and emerging scholars.

Broad Institutional Concerns

In addition to student and faculty-specific concerns, academic officers discussed severe reductions in fiscal support in the context of the core functions of postsecondary institutions. Some of the possible consequences of budget reductions are:

- Reductions in support staff and administrative support (Information Technology, Library);
- Compromise of institutional mission;

- Limitations in compensation strategies because of pre-existing instructional space on campus to include class size, research capacity and condition of classrooms;
- Institutional rankings jeopardized;
- Consolidation or elimination of productive programs and/or departments;
- Increased dependence on adjuncts if they are available;
- Industrial and other external ventures & funding are at risk; and,
- Library acquisitions reduced or abandoned with surcharges to purchase back issues if adequate economic resources are secured in the future.

Virginia's public four-year institutions vary widely in their ability to sustain operations through the current economic crisis. For example, physical plant limitations constrain an institution's reorganization choices. Small liberal arts institutions may not have classroom capacity to support larger sections. Even if institutions are successful in raising private donations, they are often earmarked for specific initiatives. Matching criteria associated with some external funds are in jeopardy because of reduced fiscal flexibility and an inability to leverage state dollars to support student and faculty research. In some cases, grants already awarded may be lost because of an institution's inability to meet contractual match funding obligations. Institutions have been forced to make difficult decisions relative to program offerings, community outreach services research capacity. Published rankings, such as those found annually in the U.S. News & World Report (2002), are significant because they aid in the recruitment of in-state and out-of-state students as well as faculty. Consequently, reductions in rankings combined with a reduction in services compromise institutional ability to attract potential students and faculty.

Discussion

Virginia is not alone in its efforts to balance resources and priorities, as evidenced by widespread state budget crises (American Association of State Colleges and Universities, 2002b). State legislatures throughout the nation are faced with difficult decisions associated with the distribution of limited resources to meet unprecedented demands for state support. Current pressures on public colleges and universities are complex and show no signs of abating as a result of rising costs associated with providing education; reductions in federal need-based student aid in the form of grants; demographic shifts; and, the increased demands from the private and public sector for employees possessing postsecondary credentials. However not all the consequences of deficits are considered negative by stakeholders. For example, retrenchment to institutional mission could strengthen the diversity of Virginia's higher education system and promote an efficient use of state monies. In the final analysis, legislators, policy-makers and institutional administrators find themselves adjusting to the demands of numerous sectors in an economic environment ill-suited for increases in investment.

From an institutional perspective, calls for increased accountability, workforce preparation and responsiveness to critical shortage areas such as nursing and teaching, have placed additional resource demands on postsecondary institutions (American Association of State Colleges and Universities, 2001). Unfortunately, increased demands

imposed by legislators, students, and corporate entities are most often not accompanied by adequate funding to meet articulated priorities (American Association of State Colleges and Universities, 2002b).

Observations drawn from this investigation present compelling evidence of potential damage to Virginia's higher education system. Four major findings relevant to the system of higher education are:

- First, appropriations reductions in the 2002 General Assembly session and the subsequent Gubernatorial cuts of October 15, 2002 will most likely have a long-term negative impact on students, faculty, institutions and communities;
- Second, institutional mission and size influences the ability of colleges and universities to preserve academic programs and services;
- Third, disadvantaged students will be disproportionately affected by budget reductions; and,
- Finally and most notably, budget allocations are policy decisions reflecting the Commonwealth's priorities and as such are re-defining current and future institutional capacity to support enrollment growth and the economic demands of the new millennium.

As reflected in this synopsis, policy-makers should take into account the many intended and unintended consequences associated with shifts in institutional revenue. For example, if state funding levels continue to be an unpredictable and declining proportion of institutional support, the legitimacy of state governing agencies' and legislative mandates may be questioned (Selingo, 2003). National accreditation of programs and departments may be at risk if legislative and institutional reallocation decisions result in failure to comply with predetermined standards.

The unfortunate reality for institutions is that there are political consequences associated with meeting the challenge of providing services and maintaining quality during difficult economic times. When public colleges and universities compensate for state-based support during austere times, it is a formidable challenge to convince legislators of the losses incurred and the need to not only restore losses but keep pace with the rising costs associated with providing a quality postsecondary education (Jacobson, 2001).

As institutions actively seek funding to replace state-based support, policymakers at all levels should be vigilant about the consequential externalities associated with revenue sources. Decision-makers should remember that budget allocations are also policy choices reflecting Commonwealth priorities. Stated differently, "taxing and spending decisions are inevitably made within a political contexts" (American Association of State Colleges and Universities, 2001 p. 14). Of great consequence are the decisions influencing colleges and universities, the engine of economic development and new knowledge creation. As such, it behooves legislators and members of the academy to work collaboratively to not only determine how the current budget shortfall will be handled, but also to plan for the short and long-term future of Virginia's higher education system.

Budget Choices, Policy Decisions: Challenges Facing Virginia's Four-year Colleges and Universities in the Midst of a Budget Crisis

Introduction

This paper examines the potential consequences of severe reductions in the fiscal support of four-year public colleges and universities in general and Virginia in particular from the perspective of chief academic officers. In the summer and fall of 2002, a qualitative case study was initiated in conjunction with the academic officers of Virginia's fifteen (15) four-year public colleges and universities. The data secured through interviews, correspondence and surveys was used to assess the institutional perspective relative to the 2002 General Assembly appropriation reductions and the subsequent October 15, 2002 budget cuts. The timing of diminished funding did not correspond with academic planning cycles and other factors contributing to the fiscal well being of institutions. As a result, comparative quantitative data reflecting budget impact will not be available until at the earliest, the end of academic year 2003-2004. However, early data collection suggests that the concerns of the academic officers were well founded.

The goal of the investigation is to provide salient information to higher education policymakers as they consider the role and configuration of Virginia's higher educational system in the new millennium. While all levels of public education face the possibility of decreased support as a result of state budget deficits, the foci of this paper are the idiosyncratic burdens faced by Virginia's public four-year postsecondary institutions. Issues presented in this paper, however, also reflect a similar predicament in the Commonwealth's Community College system and postsecondary institutions throughout the nation as nearly every state grapples with budget deficits, reduced revenues and increased demand for state-funded services (Boyd, 2002).

HIGHER EDUCATION IN THE NEW MILLENNIUM

One of the great challenges of institutions of higher learning is the delicate balancing act between academic priorities and responsiveness to social, economic and political demands. Higher educational institutions, long considered the gatekeepers of economic stability and quality of life for individuals, systems and nations, now find themselves faced with unprecedented demands as a result of globalization and the influence of emerging technologies (Bulger, 2003; Papadopoulos, 1998). Demographic shifts place different kinds of pressures on institutions of higher learning to include the aging of the national population and the racial and ethnic distribution of America's youth. The many political, economic and social forces to which postsecondary institutions respond concur that degree attainment in the 21st century has added significance due in large measure to the heavy reliance upon technological innovations and the competitive pressures of a globalized economy.

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Attainment of a college degree in this environment has economic consequences because individuals earning college degrees earn appreciably more during their work lives than individuals who do not (American Association of State Colleges and Universities, 2002a; American Council on Education, 2001b; Chang, Witt, Jones & Hakuta, 2000). For example, on average the difference in annual earnings between those who hold college degrees as opposed to those who hold only high school diplomas was $20,085 per year in 1998 (American Council on Education, 2001a). Without a college degree, average income is below $30,000 without regard for sector (Bulger, 2003). Growing demand for postsecondary opportunity, however, has simultaneously converged with other complex dilemmas, such as, an economic recession, escalating health care costs and an aging population. Competition for limited resources to fund services largely supported by state revenue have over the last decade resulted in a reduction in state-based support of public higher education as a proportion of public college and university budgets. Limited in their ability to raise tuition in many cases, public institutions faced with upsurges in operational costs aggressively sought alternative funding sources in order to meet the needs of growing numbers of students (Hebel, 2002).

To better understand the consequences of severe budget deficits on Virginia's system of higher education, it is most meaningful to place contemporary dilemmas in the context of national higher educational challenges. In an American Association of State Colleges and Universities (AASCU) (2002b) survey of state legislators, it is anticipated that higher education will represent a reduced proportion of state general fund budgets for at least the next five years. According to an evaluation of state finances Virginia, along with nineteen other states and the District of Columbia is ranked as the most critical in spending overruns (American Association of State Colleges and Universities, 2002b; Boyd, 2002). As the Commonwealth continues to make the difficult decisions associated with the distribution of limited resources the short and long-term consequences of policy decisions reveal lessons for not only Virginia but also postsecondary institutions throughout the United States.

Expenditures in the form of appropriations to support all levels of public education have historically been remanded to the states. What has changed is the propensity to redistribute control of portions or all aspects of other social programs to states with some federal monies to defray associated costs. Social programs in the context of this discussion refer to any government-funded program established to meet the needs of its citizens, which benefit the population at large. Examples of such initiatives include Social Security, Medicaid, Medicare, and public K-12 education. Social program commitments are predictably constrained in times of reduced revenues and rising costs and are not easily controlled by state decision-makers. For example, spending issues over which the Commonwealth of Virginia has little or no control at the state government level are: the number of students to be served by public schools; the costs of health insurance; the population in need of Medicaid and Medicare support; the numbers of incarcerated individuals; and the costs associated with the recent drought (Warner, 2002a). Nearly two-thirds of Virginia state governmental spending can be accounted for by K-12 public education, transportation, Medicaid and higher education appropriations (Knapp, 2002). In light of overwhelming demands by "non-discretionary" line items (such as Medicaid and K-12 education) public colleges and universities are most

vulnerable to budget cuts because they tend to be considered more "discretionary" than other expenditures.

Higher education, however, should not be considered purely a drain on limited resources. One example of a return on an investment in higher education would be the contribution educated individuals make to a state's tax base. As noted earlier income potential between those who hold college degrees versus those with high school diplomas is considerable. Beyond the personal benefits of a college degree, participation in higher education has historically been considered a public good, or an investment that serves the interests of broader society and not just the individuals who earn degrees (American Association of State Colleges and Universities, 2002a). If higher education is considered a public good, all citizens potentially reap direct and indirect benefits from institutional and individual productivity. Further from a governmental support perspective, college graduates are less than one-half as likely to participate in public assistance programs as non-college educated persons (Knapp, 2002). As another example, Harvard economist Caroline Hoxby (as cited in American Association of State Colleges and Universities (AASCU), 2001) details three reasons higher education should be considered an engine of economic development. They are:

- The high correlation between educational attainment and economic growth in the United States;
- The fact that the United States has a comparative advantage in producing goods and services with high skill content; and,
- The extent to which growth of the technology-related sectors of the economy depends on an ample supply of educated labor (American Association of State Colleges and Universities, 2001 p. 2).

Some argue that higher education has never been more important because of its role as an "engine" of economic development and transformation (AASCU, 2002a). Others have noted that the most valued resource of business in the knowledge economy is a highly skilled labor force (Knapp, 2002). As such, investments in public colleges and universities provide not only individual benefits but also fuel regional economic development and yield benefits to the general population.

Demographic shifts contribute as well to the relevance of investments in higher education. Consider the potential impact of massive retirements in the next twenty-five (25) years and the currency of postsecondary degree attainment. By 2020 nearly 43 million American baby boomers with at least some college education will be retired or near retirement. The U.S. Bureau of Labor Statistics predicts that in light of this shift, there will be a prospective deficit of 12 million workers with college educations (Callan & Finney, 2002). In the Commonwealth of Virginia, between 2000 – 2025, the number of citizens over the age of 65 is projected to increase from 788,000 to 1.5 million (Southern Regional Education Board (SREB), 2001). As this population matures and leaves the workplace their replacements need a different skill set than their predecessors, which includes some postsecondary training and in many cases technological proficiency. For example, a majority of the ten fastest growing occupations in the United States demand an associates degree or higher as the entry-level credential (Economic Information

Services Division, Virginia Employment Commission, 2000). The fastest growing employment fields in the Commonwealth as per the Virginia Employment Commission (2002) are computer engineers, computer support specialists, nurses, systems analysts, teachers, and general managers.

The racial, ethnic and socioeconomic composition of America's youth is also changing, producing an additional set of implications relevant to higher educational participation. The U.S. Census Bureau indicates that based on current population growth patterns, by the year 2015, 80% of potential traditionally-aged college students (18-24 year olds) will be non-white (Business-Higher Education Forum, 2002). According to the Business-Higher Education Forum (2002), the income potential of this group, if afforded the opportunity to attain postsecondary degrees is astronomical (in excess of $200 billion). In Virginia, minority students are projected to comprise 37% of high school graduates by the year 2007. Unfortunately, the proportion of the population most apt to be underrepresented in higher education is also most underrepresented in the fastest growing employment fields of mathematics, the sciences, technology and engineering. The Business-Higher Education Forum (2002) predicts that unless aggressive steps are taken to ensure that minorities earn college degrees, America faces a serious worker shortage that will have deleterious economic and social consequences.

Students, parents, the general public, legislators, higher educational institutions, lower schools (grades K-12), and the business community all are examples of stakeholders in the productivity of postsecondary systems (Lingenfelter, 2001). Stakeholders are individuals or groups with a vested interest in an issue, in this case higher education (Dunn, 1994). Each of these stakeholders reaps the direct and indirect benefits of public higher education. The interdependence of stakeholder groups is evident in the many interactions between the public and private sectors of the economy. For example, public pre-K-12 schools are a major source of college students and the beneficiaries of postsecondary productivity through the preparation of future teachers, administrators and other instructional and support leaders. Elected officials (federal, state and local) are charged with promoting interventions that enhance the viability and vitality of the economy and often the funding and policy mandates governing pre-K-16 capacity. A highly educated workforce attracts corporations to localities and creates employment opportunities for residents. As noted earlier, increasingly the business community needs individuals possessing postsecondary degrees who have developed higher order thinking skills to promote profitability. Individual students also gain much from a college education. Upon graduation employed individuals contribute to their personal wealth potential, the national economy, the tax base of their states and social welfare programs such as social security. Thus, not only does higher education, as noted earlier by Dr. Hoxby (as cited in AASCU, 2001), play a pivotal role in economic development, but also, stakeholders interests are inextricably bound to one another.

Given the inter-relationship between higher education systems and their stakeholders, states cannot afford to promote higher educational policies without careful regard of the intended and unintended consequences of said decisions (State Council of Higher Education for Virginia, 2002a). Stated differently, addressing higher educational issues in isolation is counterproductive. Consider higher education's funding patterns and what they reveal about the significance of severe reductions in state-based support.

Public Funding of Higher Education and Stakeholder Interests

One original premise guiding state-based support of higher education was the notion that the cost of attaining a postsecondary degree directly influenced matriculation decisions. As a result, value was assigned to keeping tuition as low as possible in hopes of encouraging participation among state residents (American Association of State Colleges and Universities, 2002a). Institutional funding streams over time have become increasingly convoluted as state-level and institutional policy makers wrestle to control costs. Figure 1 depicts the contemporary funding patterns of public higher education in the United States.

Figure 1: Contemporary Public Higher Education Funding Patterns

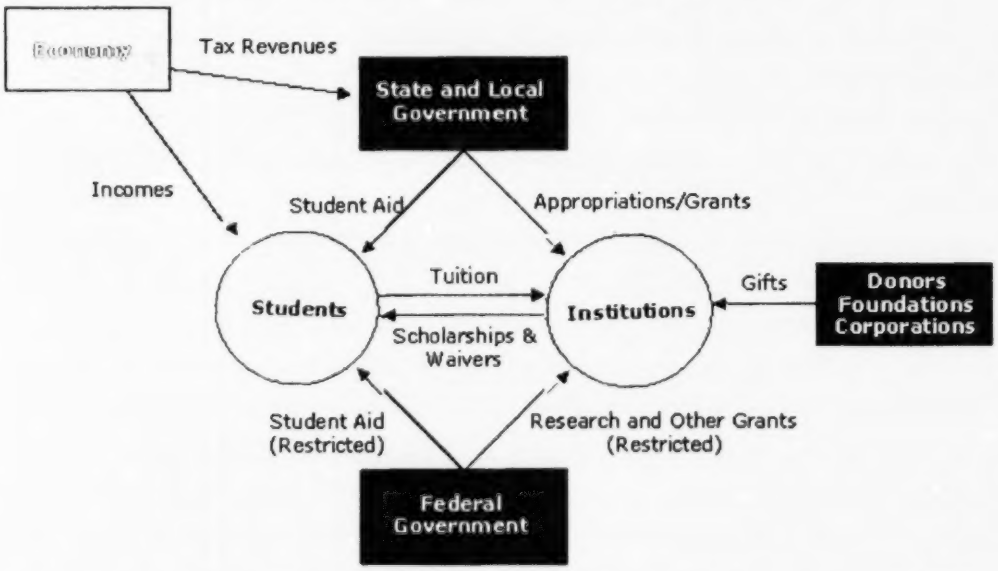

Figure provided by: The National Center for Higher Education Management Systems (2002). The National Information Center for Higher Education Policymaking and Analysis: Finance. [http://www.higheredinfo.org/catcontent/cat8.php].

As reflected in Figure 1, there are numerous funding sources contributing to the operating budgets of public postsecondary institutions. Events, however, can and in some cases have negatively impacted markets and subsequently the resources available to support postsecondary institutions and students. For example as of fiscal year 2002, virtually every state in the U.S. experienced budget shortfalls (American Association of State Colleges and Universities, 2002b; Hebel, Schmidt, & Selingo, 2002a; Pear, 2002). Reductions in corporate profitability have decreased resources that might have been available for grants to institutions. Concurrently, slowed local economies, lay-offs and tax rebate initiatives have reduced tax revenues of states and localities.

During the 1990s higher education sustained varying degrees of investment reflected a trend of state legislatures to freeze and in some cases reduce public college and university tuition. Meanwhile, increased numbers of students became interested in

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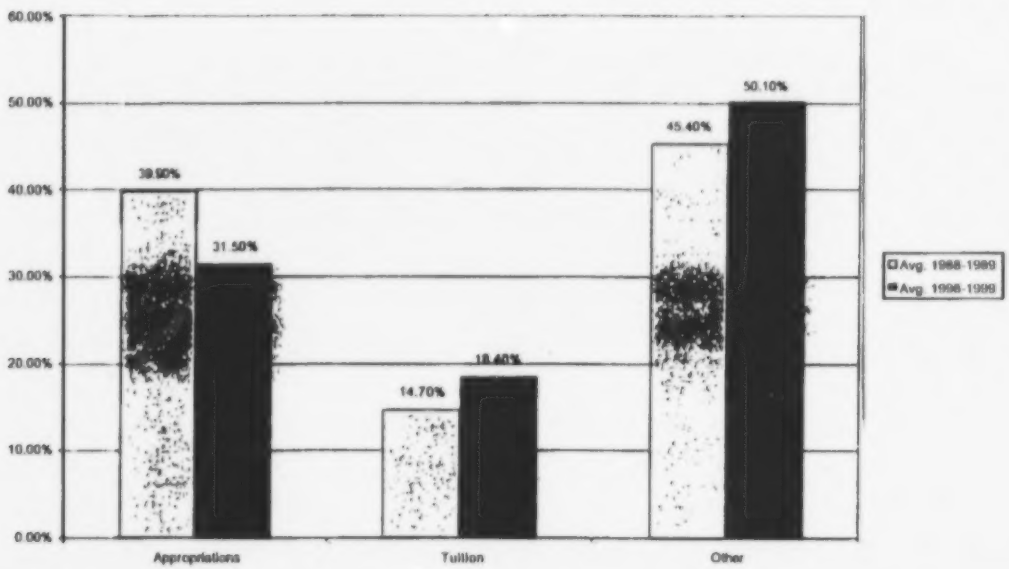
attending college, at least in part related to workforce entry-level requirements (Hebel, 2002). Even if public institutions were permitted to increase tuition as a means of compensating for increased demand, costs rose faster than could be offset by state-based or tuition support. According to a report issued by the State Higher Education Executive Officers and MGT of America, average state appropriations per full time equivalent student between 1988 and 1993 decreased by 15% in constant dollars. By 2001, aggregate increases, decreases and freezes in fiscal support of higher educational institutions resulted in funding levels comparable to adjusted 1984 levels (McKeown-Moak, 2001). Throughout the nation, variations in support converged with rising costs of operation, numbers of students served, and technological investments. As a result, shifts in public postsecondary funding patterns created a unique set of intended and unintended consequences for students, institutions, legislators and the private sector.

Figure 2 depicts the national shift in funding sources of public four-year institutions between the academic years 1988-1989 and 1998-1999 from state appropriations, tuition and other sources. The most significant increase in funding came from other sources of revenue, which includes grants, endowments and collaborations with other entities. Tuition as a proportion of total funding increased. However, state appropriations for public higher education dropped during this decade (American Association of State Colleges and Universities, 2002b).

Figure 2: Revenue for Public Four-year Institutions, 1998-1989 and 1998-1999



Adapted from: (American Association of State Colleges and Universities, 2001)

Reduced state and local revenue have impacted monies available to institutions (in the form of state appropriations) and students (in the form of aid). Meanwhile, public expectations relative to colleges and universities have not been adjusted to reflect shrinking state-based support (AASCU, 2002b). Instead, postsecondary institutions are

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charged with meeting their goal of producing new knowledge, facilitating an educated citizenry and enhancing economic development while compensating for changing levels of state support by raising tuition and seeking federal and foundation research support and donations from various sources. While applying for external funding through grants and private-public partnerships are a regular postsecondary activity, pressure to secure money has increased markedly because state-base funding as a proportion of institutional budgets have on average declined and become increasingly unpredictable.

The economic forecast for higher educational support early in 2001 looked grim because State revenues were down, annual giving had slowed, financial demand continued to rise and endowment contributions slowed (American Association of State Colleges and Universities, 2002b; Brownstein, 2001). Figure 2 depicts an increased dependence upon varied external sources and included external fundraising, student fees, profit-making ventures, and grant writing (American Association of State Colleges and Universities, 2001). Relative to tuition, during the 2001-2002 academic year public colleges and universities raised tuition an average of 7.7%, the largest annual increase since 1993. This strategy exceeded even private institutions' average tuition increases of 5.5% for that year (Schemo, 2002).

It is important to bear in mind that higher education expenditures, as a percent of state budgets, may or may not be an indication of rhetorical support for institutional missions. Rather, it is possible that shifts are the result of the most palatable funding decisions based on the information available at the time, more urgent demands for funds, and the political will to support a particular course of action or inaction. This study concludes that funding shifts, without regard for reason, have exacted consequences on the symbiotic relationship among institutions, students and faculty.

Implications of State Deficits on Institutions, Students and Faculty

Divisions of stakeholders into discrete categories of student, faculty and institutional issues have merit for purposes of categorization; however, in practice such separations are irrelevant. As will be revealed in this section, student's issues are influenced by and impact faculty and institutional challenges. Notions that state support can be completely replaced by increased tuition, endowments and grants are flawed. Postsecondary institutions' missions, degree-granting levels, populations served and fundraising potential vary widely (AASCU, 2002a). As a result, not all public four-year institutions possess the same capacity to generate income. For example, federal research dollars are disproportionately awarded to institutions with sophisticated laboratory facilities and eminent scholars in their disciplines. Fundraising efforts in the form of financial gifts are most effective when staff are hired with expertise devoted to this function.

Comprehensive research institutions are more apt to command the resources and staff charged specifically with raising revenue and supporting the salary and research of highly respected scholars. Location, institutional reputation, and staff expertise also influence the ability of institutions to form corporate collaborations. Successful fundraising alone, however, does not compensate for reductions in state support. Endowments are more limited than generally perceived because most funds are earmarked for specific purposes, such as a laboratory named after its benefactor.

Restricted monies cannot be used to replace state support of faculty salaries, research or student aid.

There have been extensive spillovers effects of state and federal funding policies on systems of higher education in general and students in particular. Spillovers or externalities refer to indirect anticipated or unanticipated consequences of policy decisions (Dunn, 1994). One of the spillover effects of constrained budgets has been a change in student support and its attendant impact on institutional diversity. Tuition increases over the last decade have not been accompanied by a corresponding rise in federal grants to students. Instead, loans now constitute the majority of student support portfolios. For example, in the 1980s about 40% of the average student aid package included loans (Brownstein, 2001). In the 1990s, financial aid in constant dollars increased by 90%, but most of these increases (67%) were loan programs and 23% were grant programs. By 2000, 60% of all student aid was loan-based. During the same period, the average cost of attending four-year public institutions between the late 1980s and 1990s increased from 40% to 62% of the income of families in the lowest twenty percent of the income distribution in the United States (The Advisory Committee on Student Financial Assistance, 2002).

Even if students are qualified academically for college, the effect of policy shifts which accommodate middle-income affordability and use merit as a basis for financial assistance have a negative impact on low-income student participation. Unmet financial need influences college attrition in at least two ways. First, costs may prohibit attendance at all, and second, the burdens of work and loans force students to quit within two years of graduation (The Advisory Committee on Student Financial Assistance, 2002). Additionally that same research reveals that minority students on average are more sensitive to college costs than their white counterparts. Having sufficient funds enhances academic performance (having to work less), facilitates social integration on campus, and increases chances of persistence to graduation. These trends are additionally significant considering the distribution of poverty in the United States.

As per the Children's Defense Fund (2003) just over 16 % of the children in the U.S. lived in poverty in 2000. Of those children, Caucasians constituted over seven million (or 13% of the total) while over three million (30.9% of the total) were African American and more than three million (28% of the total) were Hispanic. According to U.S. Census Bureau projections, poverty distribution will act as a disparate attendance barrier to the population soon to comprise the majority of the college age pool (Business-Higher Education Forum, 2002). Increased dependence on loans as opposed to grants are pivotal to the attendance decisions and persistence among economically disadvantaged students as reflected in Figure 3 below (McKeown-Moak, 2001).

Figure 3: Impact of SES on College Attendance of Highly Qualified High School Graduates
Adapted from: (The Advisory Committee on Student Financial Assistance, 2002)

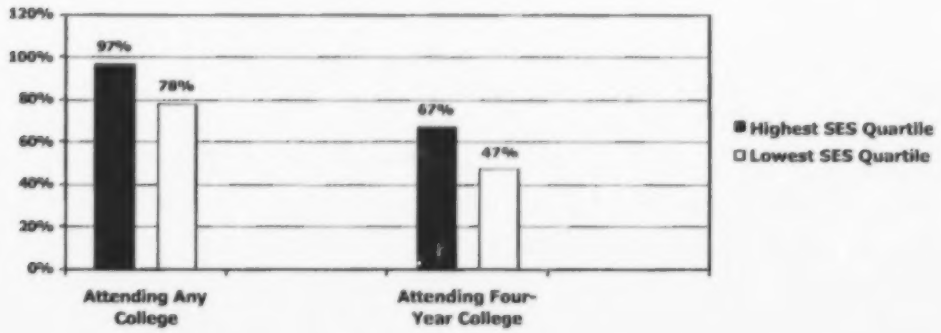

Figure 3 depicts the impact of rising postsecondary costs on poor students' matriculation decisions. Based on research conducted by the Advisory Committee on Student Financial Assistance (2002), seventy-eight percent (78%) of academically qualified low-income students attend postsecondary institutions after graduating from high school. Only forty-seven percent (47%) of highly qualified low-income high school graduates attend four-year colleges because of cost. While the shift to more loans than grants in postsecondary support is consequential for all students, it is particularly influential for low-income and minority students. Rather than accruing significant debt to attend college, low-income and minority students opt to work. One of the tragedies of incomplete funding is that nearly half of all college-qualified low and moderate income high school graduates (400,000 students) will be unable to attend a four- year college and 170,000 students will not attend any post secondary institution at all because of cost constraints. Further, the burdens of work and loans forces forty-three percent of low-income students to abandon their studies within two years of graduation (The Advisory Committee on Student Financial Assistance, 2002).

Reduced grant support also has an impact on the decisions of out-of-state students to attend the college of their choice. If tuition costs rise and support does not keep pace, states that attract significant proportions of out-of-state students jeopardize enrollments. Out-of-state students are an important source of institutional revenue primarily because assessed tuition averages more than double that of in-state students. In practice it is out-of-state students that subsidize the cost of providing in-state students affordable higher educational opportunities (Casteen, 2003). For states such as Virginia, whose out-of-state student population was approximately 21.9% of Virginia's total public four-year postsecondary institutions enrollments as of the fall of 2001, the economic ramifications of significant declines could yield notable consequences (State Council of Higher Education for Virginia, 2002b).

Faculty are particularly meaningful to institutional well being and influence student recruitment and retention capacity of colleges and universities. Research grants are largely written by faculty and contribute significantly to college and university

external funding sources. There are three tenure-track positions available at most colleges and universities: full professor, associate professor and assistant professor. An assistant professor is an entry-level faculty position, an associate is the first tenured level, which generally takes 5-7 years to attain and a full professorship is sometimes awarded some years later. Progression in rank traditionally requires conducting original research, service to the university, teaching competency, publishing books and articles in peer-reviewed journals, and in some cases securing outside funding for research initiatives through grants. In short, faculty are required to actively engage in multiple expressions of scholarship with the goal of creating new knowledge or contributing to a deeper understanding of existing knowledge.

Distinctions in rank predispose individuals to different levels of vulnerability in times of economic uncertainty as well as a faculty member's ability to assist their respective college in subsidizing institutional budgets. Individuals without tenure are much more susceptible to lay-offs creating increases in professorial teaching load and class size of those who remain. Faculty reductions also decrease opportunities for personal interactions with students and colleagues. Minimal time to advise and mentor students and unpredictable fiscal support to conduct research and attend conferences with students or individually can have long-term consequences. In order to stay abreast of groundbreaking initiatives in their fields, it is critical that faculty members exchange ideas and collaborate with their colleagues within and outside the university of their employment. Conference participation keeps faculty abreast of trends in their respective disciplines and facilitates collaborative ventures with other scholars benefiting individual faculty and the students they teach and mentor.

In addition, research grant solicitation is tied to the research agendas of faculty and institutional resources. In the absence of quests for new and groundbreaking knowledge or innovative deconstruction of existing bodies of knowledge the probability of favorable consideration in national and international grant competitions decline.

State Budget Deficits and Budget Reduction Strategies

The National Conference of State Legislatures (NCSL) does not provide much hope that the economic climate will markedly improve in the next few years. NCSL has estimated that total state budget shortfalls for the fiscal year 2002-2003 will exceed $49 billion and impact nearly every state in the nation (Associated Press, 2002). By 2004, combined state shortfalls are projected to approach $85 billion (Janofsky, 2003). Dire economic projections are the result of numerous factors including weak economic performance, lower tax income than projected and terrorist activities. Given the prevalence of budget deficits, it is appropriate to consider how state legislatures and public four-year institutions are compensating for shortfalls. Table 1 does not purport to be an exhaustive account of state deficits, it merely places Virginia's fiscal crisis in a national context.

Table 1: Sample of Budget Shortfalls

State	Budget Deficit/year
Alaska	$600 million (2002-3)
Alaska	$600 million (2002-3)
Arizona	$900 million (2002-3)
California	$12.5 billion (fiscal year ending in June 2002)
Connecticut	$200 million (FY ending 2002)
Florida	$1 billion (2001-2)
Illinois	$1.6 billion (2002-3)
Maine	$250 million 2002-3
Maryland	$1.7 billion 2001-2
Massachusetts	$1.1 billion 2001-2
Minnesota	Almost $2 billion 2002-3
Montana	$250 million 2002-3
New Jersey	$700 million 2001-2
Rhode Island	$70 million 2001-2 Expected to grow to $200 million 2002-3
Virginia	$5.3 billion (2002-3)
Washington	$1.5 billion (2002-3)

Adapted from: (Associated Press, 2002a; Hebel et al., 2002a; Hebel, Schmidt, & Selingo, 2002b; Mills, 2002)

As reflected in Table 1, state shortfalls range from the hundreds of millions to in Virginia's case in excess of $5 billion dollars [subsequent estimates exceed $6 billion (Ginsberg, 2003)] and $12.5 billion in the case of California. Deficits are widely dispersed by region reflecting the severe adjustments higher educational institutions must make to accommodate budgetary shortfalls within a range of choices dictated by state-based policy and procedure. Some states began feeling the pressure of deficits in their FY 2001 versus the 2002 fiscal year. Despite the timing, state economies tend to lag behind the national economy and as such, lag in recovery as well, thus accounting for NCSL's predictions (Hebel, Schmidt, Selingo, 2002b). It may take as long as eight years for state economies to recover from the current recession (Casteen, 2003; Boyd, 2002).

Some states have been able to hold public higher education harmless while other states have reduced support. Table 2 notes the most common institutional responses to reductions in state appropriations across the country and is not an exhaustive list, but rather a sample of actions taken.

Table 2: Institutional responses to appropriations reductions at public institutions

Institutional Responses	States
Increase Tuition	Illinois
Increase in Class Size	Washington
Freeze Faculty Salaries	Illinois, Washington
Lay-off Staff	Illinois, Washington
Lay-Off Full-time faculty	Illinois
Reduce Part-time faculty	University of North Carolina System
Raise Admissions requirements	*Washington
Hold Courses off campus	University of South Florida
Target Funding for high need professions such as teaching or nursing or region-specific needs such as rural areas	Colorado, Connecticut, New Mexico, South Dakota, Wyoming, New Hampshire, Alaska, Illinois, New York, North Carolina
Change state law relative to student aid availability for students attending public versus private institutions	Nebraska
Make financial-aid programs available to part-time students	*New Jersey
Authorize bond referendums to finance higher education construction and renovation	*California, Virginia
Form commissions/advocacy groups to represent higher educational institutions' interest in the state legislature	*Pennsylvania

Adapted from: (Burdman, 2002; Hebel et al., 2002a, 2002b; Mills, 2002)
* Indicates policy is under consideration

Illinois' and Washington's responses reflect common compensation strategies. Illinois' budget shortfall prompted a decrease in the public higher education system allocation of $147 million (a 5.5% reduction from expected support). The responses of higher educational institutions included increases in tuition, layoffs and salary freezes of staff and increased use of adjunct (part-time) professors. For example, the University of Illinois' appropriations elimination of $89 million resulted in the reduction of 900 jobs on three campuses, which included 175 faculty (Burdman, 2002). Washington State resulted in a $68 million cut in the fiscal 2002-2003 budget of public postsecondary colleges (a 4.8% reduction). Tuition at public institutions increased between 14-16%. Fees for technology rose and salary freezes were extended. Faculty attrition (attributed to lay-offs, retirements and faculty leaving for more lucrative employment) have resulted in larger classes and a decrease in the range of course offerings for students. Raising admissions requirements to control growth is currently being considered (Mills, 2002).

The most prevalent legislative strategies throughout the nation include reducing state-based support of higher education institutions, lifting tuition freezes imposed during

the 1990s and freezing faculty and staff salaries. Institutions have responded by becoming more politically active, reducing the number of full- and part-time faculty on staff, raising tuition and fees and reducing financial aid in the form of grants to students. Unfortunately for students, the consequences are larger class sizes; potentially longer time to graduation because of fewer sections of required classes; fewer opportunities for mentorship, research and advisement; and, perhaps most critically, a greater dependence on loans as opposed to grants to defray the cost of attendance. As a result, there are pervasive consequences, which accrue to postsecondary institutions and their stakeholders.

STUDY FINDINGS

Virginia's exemplary higher educational system has distinguished itself as possessing high caliber and diverse types of four-year institutions. Many scholars are recognized as highly competent and renowned in their fields, as evidence by the two conferred Nobel Prizes in 2002 and the external funding secured through grants, patents, and collaborations with various enterprises. The Commonwealth's research institutions maintain impressive national and regional ranking, and smaller institutions are regularly lauded for their stellar programs (U.S. News & World Report, 2002). Virginia has the 11th largest educational system of any state in the nation supporting fifteen public colleges and universities, of which two are Historically Black Colleges and Universities (HBCUs) and one military academy (see Table 3).

Table 3: Virginia's Public Four-year Colleges and Universities

Virginia's Colleges and Universities	
• Christopher Newport University	• Radford University
• College of William & Mary	• University of Virginia
• George Mason University	• University of Virginia at Wise
• James Madison University	• Virginia Commonwealth University
• Longwood University	• Virginia Military Institute
• Mary Washington College	• Virginia Polytechnic Institute & State University (Virginia Tech)
• Norfolk State University	
• Old Dominion University	• Virginia State University

Twenty-four (24) community and two-year colleges and forty private not- for-profit colleges and universities are also available to students. As of the fall of 2002, the system served 372, 000 students. Approximately 79% of the students at the four-year public institutions were from Virginia and 75% attended full time. Seventy percent (70%) of the students in Virginia's postsecondary system are white, six percent (6%) are Asian and Pacific Islanders, sixteen percent (16%) are African American, three percent (3%) are Hispanic, three percent (3%) are nonresident aliens and one percent (1%) each are American Indian and Alaskan Native, and individuals whose race was not identified (State Council of Higher Education for Virginia, 2003).

The budget crisis currently endured in Virginia is the result of inter-related factors yielding budget shortfalls in excess of six billion dollars. Late in the1990s, state spending increased and more than fifty new tax breaks were authorized. By 2002, preauthorized spending could not be supported most notably because of a recession, increased needs for security, and a record setting drought. As Governor Mark Warner took office in January of 2002, spending exceeded state revenue by approximately $3.8 billion dollars. Applying one-half of the "rainy day" reserve, requiring significant spending cuts; freezing car tax reimbursements, and shrinking the size of state government compensated for shortfalls. For the first time in six years, public colleges and universities were permitted to raise tuition to help compensate for reductions in state appropriations. Postsecondary governing boards were asked to keep tuition increases under 9%; however, there were no mandated restrictions. (The Chronicle of Higher Education, 2002a; Warner, 2002a,b)

Subsequent to the end of the 2002 General Assembly session, state economists because of stagnated economic growth projected an additional $1.5 billion dollar deficit bringing the 2002-2003 budget shortfall to $5.3 billion. As a result, additional cuts were levied against all state agencies. The Gubernatorial approach to the crisis was to evaluate state agency budgets (adjusted for 7%, 11% and 15% reductions) and rendered support for initiatives designed to improve governmental efficiency including re-examining staffing levels and standard operating procedures. Ascribed cuts to all state agencies including postsecondary institutions approximated $800 million, leaving a deficit of $700 million for the General Assembly session of 2003 to address (Warner, 2002a, 2002b).

Gubernatorial reductions to the four-year public institutions in October varied. Proposed funding deductions in fiscal year 2004 ranged from 9.3% to 14% (Commonwealth of Virginia Department of Planning and Budget, 2002). Combined appropriation decreases from the 2002 General Assembly session and the October reductions resulted in double-digit decreases in state-based support of public colleges and universities. Few corporate concerns would be able to function with revenue reductions of such magnitude without adequate advance notice and significant changes in operations. Higher education institutions experienced even more dire consequences given the timing of cuts (students had already been admitted, faculty contracts and financial aid commitments had been made for the 2002-2003 academic year).

In an effort to determine the consequences of the fiscal reductions in Virginia's public colleges and universities, the chief academic officers of each of the fifteen institutions were contacted. Interviews were conducted prior to the last round of budget cuts and subsequent correspondence and surveys augmented data after the Governor's announcements of October 15th, 2002. Concerns were multi-faceted and reflected concerns associated with capacity at the institutional, faculty and student levels.

Initially, only anecdotal data was available because the extent of cuts and corresponding internal cost-saving measures were unknown. Yet, despite the absence of concrete data, there was a clear need to inform stakeholders of the complex long- and short-term effects of substantive funding reductions to Virginia's public four-year higher education institutions. As time progressed, quantitative evidence emerged, which began confirming some of the anticipated outcomes.

It is important to note that during interviews and survey collection, institutional representatives did not say that each concern discussed would definitely result. Rather their concerns represented potential consequences of reduced funding. Further, each of the topics was corroborated by a majority of the interviewees and in most cases, by all participants. Some of the decisions postsecondary institutions are making in light of Virginia's fiscal crisis may be viewed as long overdue, strategically sound changes. Others, however, may jeopardize the quality of education students receive and the national rankings historically associated with certain institutions as a result of fiscal exigencies.

All spending no matter how theoretically valuable, had to be re-examined in light of core mission-based functions particularly after a second round of budget cuts in October. Re-evaluation of priorities and distinctions between what might be best versus what is sustainable relative to student services and academic concerns were key to internal policy decisions. Institutional decisions to discontinue programs and/or reduce faculty and staff were not necessarily a commentary on the value of a program or the contributions of staff and faculty but rather a function of budget realities. Communities, while outside the scope of this study have also experienced reductions in outreach services, such as after school tutoring programs where colleges historically absorbed costs. Further, local economies have been negatively impacted by factors such as higher unemployment tied to college and university staff layoffs.

Three principle categories of concerns emerged in the course of the study; student, faculty and institutional issues. (See Table 4)

Table 4: Categorization of Potential Budget Reduction Implications

Student	Faculty	Institutional
• Reductions in academic support services; • Larger classes; • Fewer sections, which impacts time to graduation; • Decreased opportunities for internships, study abroad, independent study, research; • Diminished financial support; • Fewer faculty available for advisement; and, • Increased costs disproportionately impact disadvantaged students • Fewer library hours to complete research and other assignments; and, • Rankings impact recruitment efforts of potential in-state and out-of-state students.	• Increased teaching load and larger class sizes; • Curtailed participation in community outreach and university duties such as accreditation reviews and search committees; • Decrease in research support (library & equipment acquisitions as well as money to support research projects); • Fewer resources for faculty professional development and conference travel; • Less time available to support graduate and undergraduate student research projects; • Increased advisement responsibilities; and, • Reduced ability to attract and/or retain productive faculty at all ranks.	• Reductions in support staff and administrative support (Information Technology, Library); • Institutional mission compromised; • Physical plant limitations influence class size, research capacity and condition of classrooms; • Institutional ranking jeopardized; • Consolidation or elimination of productive programs, departments; • Increased dependence on adjuncts if they are available; • Industrial and other external ventures & funding placed at risk; • Library acquisitions reduced or abandoned; and, • Program accreditation may be jeopardized.

Student Concerns

Students, as per the interviewed academic officers, will bear significant costs associated with Virginia's fiscal crisis. Because of budget constraints the quality and quantity of university interactions are apt to change. Information technology (IT) help desks and tutoring services may be curtailed because of the absence of fiscal support. Fewer professors on staff may result in larger classes and fewer sections of courses, potentially increasing time to graduation. Longer stays in college raise the cost of earning a degree, which increase the possibility of dropping out before graduation. Academic support services where students hone writing skills, may be discontinued.

As confirmed in the literature, as costs of a college education rise, economically disadvantaged students who are particularly loan averse, choose to attend community college or go to work (The Advisory Committee on Student Financial Assistance, 2002). Demographic projections are apt to place additional burdens on an already taxed system, at the time significant increases in Virginia's student population are anticipated. It is projected that the number of high school graduates in the next eight years will surge by 32,000 to 38,000 (State Council of Higher Education for Virginia, 2002b; Virginia Business Higher Education Council, 2002).

Fewer professors can result in a reduction in availability for student advisement and responsibility for small advanced seminars designed to engage students in in-depth investigations of discipline specific topics. Research opportunities for students suffer without adequate faculty oversight, as well as opportunities for independent study courses. Each of these academically valuable and intellectually enriching experiences has historically been an integral part of some programs. Hiring of adjunct professors in some cases may prevent a reduction in the number of available courses or sections, however adjuncts cannot replace full-time faculty members in functions such as advisement, research and university service. Shifts to part-time from full-time faculty are consequential for students because it is full-time faculty who in concert with students develop meaningful courses of study.

Faculty because of personal contact with students become familiar with particular strengths and can match them with employment and graduate study opportunities. Advisors are often called upon to provide references for advisees because of the duration and quality of interactions. Participation in research studies facilitates meaningful and frequent interactions with faculty which positively correlate to persistence and graduation rates for all students in general and disadvantaged students in particular.

Institutional rankings are significant because of the wide distribution and credibility associated with the annual publications and their usefulness as a student and faculty recruitment tool. Institutional ranking, such as the 2002 U.S. News and World Report edition of America's Best Colleges, include categories such as class size, institutional mission, faculty resources, retention, and graduation rates as determinants of rank (U.S. News & World Report, 2002). Virginia has historically drawn substantive numbers of out-of-state students because of the recognized expertise and the national and

regional rankings of public four-year institutions. Out-of-state students in the fall of 2001 in all of Virginia's public four-year institutions totaled 39,672 (State Council of Higher Education for Virginia, 2002b). However, Virginia's enviable rankings are not secure, as the numbers of classes (a reduction of nearly 2,800 course sections) and services available to students are cut and the numbers of faculty available for student interactions (advisement, internships, research and independent studies) are severely reduced (Irving, 2002; Virginia Business Higher Education Council, 2002). The combined impact of these changes may influence Virginia institutions' ability to recruit highly qualified out-of-state students.

Faculty Concerns

In a communication from the presidents of Virginia's public colleges, universities and community colleges, it was reported that there would be approximately 1,470 fewer faculty members on staff in the academic year of 2003-2004 than there were in 2001-2002 (Virginia Business Higher Education Council, 2002). While routine attrition and retirements historically contribute to fluctuations in faculty size, in light of the budget deficits and projected increases retirement rates, significant burdens will be placed on remaining faculty.

There is unanimous concern about the ability to leverage salary, research facilities and graduate student support to attract and retain professors of all ranks. Generally speaking, faculty compensation includes salary, research support and associated benefits. Budget deficits and hiring freezes potentially constrain institutional flexibility to thwart efforts of other institutions (corporations, agencies, in-state private and out-of-state colleges and universities) to lure faculty away and fill vacated positions.

Institutional rankings are a key recruitment tool for attracting rising and established scholars. Sometimes lower salaries are tolerated because of the prestige of an institution and research support. In turn, departmental and institutional reputations are closely aligned with the stature and scholarly productivity of faculty. Consider Virginia's recent Nobel Laureates, Dr. John B. Fenn, in Chemistry at Virginia Commonwealth University (VCU), and Dr. Vernon L. Smith, in Economics at George Mason University (GMU). VCU and GMU recruited both of these scholars later in their careers after much of their Nobel Prize winning research had been completed at other institutions, yet both are now reaping the benefits of these significant hires (Argetsinger, 2002).

Research in certain fields such as the sciences require heavy investments in equipment and facilities. Faculty recognized as leaders in their field and/or awardees of grants are attractive candidates to colleges and universities across the country. As such, if research support is not available it is not uncommon for an employment offer to be levied by other institutions or scientific enterprises. The practice of "poaching" is common in the academy irrespective of budget climate. However, faculty experiencing long-term salary and hiring freezes along with severe reductions in research support are more inclined to accept offers. Conversely, institutions without resources are not in a position to tender counter offers to encourage scholars to remain. For the humanities and social sciences, library investments in conjunction with other research support are the equivalent of a "laboratory". Institutional representatives reiterated unanimously the negative impact budget constraints would have on library acquisitions.

The current fiscal crisis and fluctuating state-based support throughout the 1990s have in some cases already severely diminished research support. Salaries of the Commonwealth's full-time public four-year faculty are already in the 35th percentile when compared to other states, placing current salary compensation far below the national average (Casteen, 2003). As noted earlier, lower salaries are sometimes endured because of the prestige of colleges and other types of support, e.g. research. Because research productivity is heavily weighed in tenure and promotion decisions, it is reasonable for institutions to be concerned about the implications of the duration of salary freezes and in some cases the elimination of funds to support research in the form of graduate assistants, leave time, conference travel and expenses incurred while engaging in research.

Institutional Concerns

In addition to student and faculty-specific concerns, academic officers discussed severe reductions in fiscal support in the context of jeopardizing some of the core functions of postsecondary institutions (American Association of State Colleges and Universities, 2001). Passage of a recent bond referendum in Virginia (Chapter 859, The Commonwealth of Virginia Educational Facilities Bond Act of 2002) will aid in upgrading facilities to accommodate new technologies and repair aging buildings. However, referendum proceeds will not replace the funds allocated to pay administrative staff to expedite the work of administrators, faculty and students; routine maintenance; and building (and in some cases re-building) departmental expertise.

Physical plant limitations may constrain an institution's reorganization choices. For example, small liberal arts institutions may not have classrooms large enough to support more students. If this is the case, more sections may be required to meet student demand. There may not be enough faculty qualified to teach high demand courses (both full and part-time). If this becomes the case, time to graduation may be impacted. National accreditation of programs and departments may be at risk if legislative and institutional reallocation decisions result in failure to comply with predetermined standards. Further, some institutional missions identify small classes and frequent faculty interactions as a core value. As such, come adjustments prompted by budget constraints compromise institutional mission.

Options of forging partnerships with private concerns, increasing endowments and seeking other sources of income are also institution specific. Ventures with private enterprises often dictate the use of funds and particular types of research. Freedom to pursue knowledge for knowledge sake is not always an option with private collaborations or grants. Certain institutions because of their size, location, resource-base and ranking are more attractive to corporate investors. For example, research intensive (Research I) and highly ranked institutions such as The University of Virginia, The College of William and Mary and Virginia Tech, because of their reputations, faculty, ongoing research projects and facilities qualify for research grant consideration that small liberal arts colleges such as Mary Washington College would not.

Matching criteria associated with some external funds could also be in jeopardy because of reduced fiscal flexibility. In some cases, grants already awarded may be lost because of an institution's inability to meet contractual match-funding obligations. The ability to leverage state dollars to support a wide array of research, student and faculty activities also may suffer. Even if institutions are successful in raising private donations, they are often earmarked for specific iniatives. As such, in times of budget reductions these large endowments cannot be unilaterally applied to offset a loss of state support.

It is impossible to overestimate the relevance of library investments to institutional and research advancement. Critical to both students and faculty are library acquisitions designed to keep researchers at all levels informed of prevailing thought. Lost opportunities to invest in library collections are difficult to resolve should economic times improve because securing old journal articles, for example, can be cost prohibitive. Further, reductions in library staff may necessitate a reduction in hours of operation, which disproportionately hinders working students.

One institutional strategy to reduce costs has been to decrease the number of programs offered. Some programs not deemed critical to college or university mission are being eliminated to free resources for core programs. Marginal and productive programs are being closed, which cannot be viewed simplistically. Closure may have deleterious outcomes. For example, programs may serve unique geographic regions and student populations. It is quite possible for a degree program to be productive in terms of graduate output, but not cost effective or aligned with core institutional mission.

While community impact is outside the purview of this analysis, outreach programs, which support communities surrounding postsecondary institutions and provide service-learning opportunities for students are in jeopardy. Higher educational institutions often underwrite the expenses associated with community outreach programs and services, which can no longer be sustained. Public school tutoring services and supervised internship and service learning opportunities are examples of such programs. Cottage industries that support campus life and services that have been outsourced, such as bookstore and food service operations, will also likely suffer in light of fiscal constraints. Local economies also experience the ripple effect of university woes when local support staff are unemployed due to widespread lay-offs.

DISCUSSION AND RECOMMENDATIONS

Virginia is not alone in its efforts to balance resources and priorities, as evidenced by widespread state budget crises (American Association of State Colleges and Universities, 2002b). State legislatures throughout the nation are faced with difficult decisions associated with the distribution of limited resources to meet unprecedented demands for state support. Current pressures on public colleges and universities are complex and show no signs of abating as a result of rising costs associated with providing education; reductions in federal need-based student aid in the form of grants; demographic shifts; and, the increased demands from the private and public sector for employees possessing postsecondary credentials. Legislators, policy-makers and institutional administrators find themselves adjusting to the demands of numerous sectors in an economic environment ill-suited for increases in investment. Not all the consequences of deficits are considered negative by stakeholders. For example,

retrenchment to institutional mission could strengthen the diversity of Virginia's higher education system and promote an efficient use of state monies.

From an institutional perspective, calls for increased accountability, workforce preparation and responsiveness to critical shortage areas such as nursing and teaching, have placed additional resource demands on postsecondary institutions (American Association of State Colleges and Universities, 2001). Unfortunately, increased demands imposed by legislators, students, and corporate entities are most often not accompanied by adequate funding to meet articulated priorities (American Association of State Colleges and Universities, 2002b).

Observations drawn from this investigation present compelling evidence of potential damage to Virginia's higher educational system. Four major findings relevant to the system of higher education are:

- First, appropriations reductions in the 2002 General Assembly session and the subsequent Gubernatorial cuts of October 15, 2002 will most likely have a long-term negative impact on students, faculty, institutions and communities;
- Second, institutional mission and size influences the ability of colleges and universities to preserve academic programs and services;
- Third, disadvantaged students will be disproportionately affected by budget reductions; and,
- Finally and most notably, budget allocations are policy decisions reflecting the Commonwealth's priorities and as such are re-defining current and future institutional capacity to support enrollment growth and the economic demands of the new millennium.

As reflected in this synopsis, policymakers should take into account in the decision-making (budget) process the many intended and unintended consequences associated with shifts in institutional revenue.

The unfortunate reality for institutions is that there are political consequences associated with meeting the challenge of providing services and maintaining quality during difficult economic times. When public colleges and universities successfully compensate for state-based support during austere times, it is hard to convince legislators of the losses incurred and the need to not only restore losses but keep pace with the rising costs associated with providing a quality postsecondary education (Jacobson, 2001).

While the concerns of academic officers were delineated into three primary categories, the designations are in fact inseparable. Services and facilities pivotal to faculty research also contribute to exemplary educational experiences for students. Institutions' rankings and ability to attract and retain scholars of all ranks are linked to the productivity of existing faculty members. Reductions in research support are consequential and trickle down to every aspect of university life to include rankings. Institutional life is a tapestry of interdependence among students, faculty, communities and the world. Public colleges and universities can, given this interdependence, be the incubator of new ideas, new knowledge, scientific discoveries and the preparation of an educated world citizenry only if seeking funding for survival does not become a consuming endeavor.

As institutions actively seek funding to replace state-based support, policymakers at all levels should be vigilant about the consequential externalities associated with revenue sources. Money comes with strings. The more entrepreneurial colleges and universities become, the fewer resources can be diverted to the creation of knowledge in under-funded fields such as the humanities. Large corporate donors tend to want returns on their investments and may primarily designate funds for ventures deemed profitable by industry standards. While providing a valuable benefit to universities, the strings attached to the money may direct activities to applied as opposed to basic research (Pulley, 2002). Even more consequential to state-level decision-makers should be the governance implications of shrinking proportions of institutional budgets coming from state coffers. For example, if state funding levels continue to be an unpredictable and minimized proportion of institutional support, the legitimacy of state governing agency and legislative body mandates may be questioned.

Diversity in the types and sizes of public colleges and universities in Virginia and throughout the nation influences each institution's capacity to weather dire economic times. Vastly different pools of resources affect the ability of institutions to provide services to students, faculty, communities and state economic development. If a mosaic of choice is to remain a reality, consideration needs to be directed toward the idiosyncratic dilemmas faced by institutions.

Projections from national and state agencies indicate a significant rise in the demand for postsecondary education in the Commonwealth and the nation for at least the next 8 to10 years. This demand in Virginia is expected to increase at the very time institutions are finding it difficult to meet the needs of currently enrolled students. Further, the nation in general and Virginia as the focus of this study will continue to experience upsurges in low-income and racial and ethnic minority applicants. Given the social and occupational mobility associated with higher educational attainment, poor attendance and graduation patterns of these groups foretell devastating consequences if not addressed. As all of these complex issues collide with fiscal exigencies, policy/budget decisions are defining and re-defining public four-year institutions' capacity to meet the needs of the students, colleges, and businesses in Virginia.

Decision-makers should remember that budget allocations are also policy choices reflecting Commonwealth priorities. Stated differently, "taxing and spending decisions are inevitably made within a political context" (American Association of State Colleges and Universities, 2001 p. 14). Of great consequence are the decisions influencing the engine of economic development and new knowledge creation, colleges and universities. As such, it behooves legislators and members of the academy to work collaboratively to not only determine how the current budget shortfall will be handled, but also plan for the short- and long-term future of Virginia's higher education system.

The dilemmas facing the Commonwealth's policymakers, legislators and public colleges and universities are not new but by many accounts, the stakes are higher. Competition for uncertain and shrinking pools of resources make short- and long-term collaborative strategic planning critical if Virginia plans to emerge from the current fiscal crisis with the stellar postsecondary institutions it has historically enjoyed. The policy decisions made now will determine Virginia's postsecondary capacity to meet the challenges of the 21st century.

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